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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,402	03/28/2002	Tetsuya Akiyama	10873.866USWO	4966
53148	7590	09/20/2005	EXAMINER	
HAMRE, SCHUMANN, MUELLER & LARSON P.C. P.O. BOX 2902 MINNEAPOLIS, MN 55402			AGUSTIN, PETER VINCENT	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/089,402

Applicant(s)

AKIYAMA ET AL.

Examiner

Peter Vincent Agustin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005 & 26 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 5-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-13 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. Claims 1-13 are now pending.

Election/Restrictions

2. Applicant's election of Group I, claims 1-4 in the reply filed on July 26, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

3. Claims 5-13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 26, 2005.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

5. Replacement drawings were received on May 2, 2005. These drawings are acceptable.

Specification

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

7. Claims 1 & 3 are objected to because of the following informalities:

Claim 1, line 5 and claim 3, line 5: "alternatively" should be --alternately--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Yanagihara et al. (JP 11-203710) (please refer to the machine translation).

In regard to claim 1, Yanagihara et al. disclose an optical recording medium (Drawing 1, element 1) for recording, reproducing, or erasing information (paragraph 2, lines 2-3: "DVD-RAM disk which can perform rewriting") by irradiation with a laser beam (Drawing 3, element 11), comprising a disk-shaped transparent substrate and a recording layer formed on the substrate (paragraph 5), wherein information tracks (Drawing 1, elements 2 & 3) and addresses (a, b, c & d) are provided on the substrate, the information tracks including groove tracks (2) and land tracks (3) that are arranged alternately in the form of a spiral or concentric circles, each of the addresses indicating a position on the recording medium and being composed of uneven strings of pits (see Drawing 4(a), element 4), the strings of pits are arranged so that center lines of the strings of pits are shifted in a radial direction of the recording medium at a distance of about one-half of a track pitch from center lines of the groove tracks and center lines of the land tracks (see Tp/2 on Drawings 4(a), 4(d) & 4(e)), and a pit width W of the pits satisfies the relationship: $Tp \times 0.37 \leq W \leq Tp \times 0.63$ with respect to a track pitch Tp of the recording medium (see Drawing 1,

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which shows that the pit width W_p is about half of the track pitch T_p , i.e., $W \approx T_p \times 0.5$, which lies within the claimed range) (See MPEP § 2131.03).

In regard to claim 2, Yanagihara et al. disclose that an optical head of an optical disk device being used has a laser wavelength of about 650 nm (understood from paragraph 2: "DVD-RAM disk", which type of disk is known in the art to use a laser wavelength of about 650 nm) and a numerical aperture of an objective lens of about 0.6 (paragraph 14, line 5), the recording medium has a track pitch of about 0.62 μm (paragraph 13, lines 1-4), and the pits have a pit width W that falls within the range of 0.23 μm to 0.39 μm (note: since the track pitch is about 0.62 μm , and since Drawing 1 shows that the pit width W_p is about half of the track pitch T_p , it follows that the pit width is about 0.31 μm , which lies within the claimed range).

Claims 3 & 4 have limitations similar to those of claims 1 & 2; thus, they are rejected on the same basis.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagihara et al. in view of Shimizu (US 5,220,556).

Yanagihara et al. disclose: in regard to claim 1, an optical recording medium (Drawing 1, element 1) for recording, reproducing, or erasing information (paragraph 2, lines 2-3: "DVD-RAM disk which can perform rewriting") by irradiation with a laser beam (Drawing 3, element

11), comprising a disk-shaped transparent substrate and a recording layer formed on the substrate (paragraph 5), wherein information tracks (Drawing 1, elements 2 & 3) and addresses (a, b, c & d) are provided on the substrate, the information tracks including groove tracks (2) and land tracks (3) that are arranged alternately in the form of a spiral or concentric circles, each of the addresses indicating a position on the recording medium and being composed of uneven strings of pits (see Drawing 4(a), element 4), the strings of pits are arranged so that center lines of the strings of pits are shifted in a radial direction of the recording medium at a distance of about one-half of a track pitch from center lines of the groove tracks and center lines of the land tracks (see $T_p/2$ on Drawings 4(a), 4(d) & 4(e)); and in regard to claim 2, that an optical head of an optical disk device being used has a laser wavelength of about 650 nm (understood from paragraph 2: "DVD-RAM disk", which type of disk is known in the art to use a laser wavelength of about 650 nm) and a numerical aperture of an objective lens of about 0.6 (paragraph 14, line 5), the recording medium has a track pitch of about $0.62\text{ }\mu\text{m}$ (paragraph 13, lines 1-4).

However, Yanagihara et al. do not explicitly disclose: in regard to claim 1, that a pit width W of the pits satisfies the relationship: $T_p \times 0.37 \leq W \leq T_p \times 0.63$ with respect to a track pitch T_p of the recording medium; and in regard to claim 2, that the pits have a pit width W that falls within the range of $0.23\text{ }\mu\text{m}$ to $0.39\text{ }\mu\text{m}$.

Shimizu discloses a pit width W of *identification* pits satisfying the relationship: $T_p \times 0.37 \leq W \leq T_p \times 0.63$ with respect to a track pitch T_p of the recording medium (column 1, lines 50-64, note specifically the inequality on line 64) (See MPEP § 2131.03). It would have been obvious to one of ordinary skill in the art at the time of the invention by the Applicant to have applied the teachings of Shimizu to the recording medium of Yanagihara et al., the motivation

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being to achieve reliable reproduction of data regardless of fluctuations due to disk eccentricity (column 1, lines 31-36 & 50-53). Note: since the track pitch of Yanagihara et al. is about 0.62 μm , and Shimizu anticipates the claimed range $T_p \times 0.37 \leq W \leq T_p \times 0.63$, substituting the track pitch value of Yanagihara et al. to the inequality anticipated by Shimizu will automatically result in the claimed "pit width W that falls within the range of 0.23 μm to 0.39 μm ".

Claims 3 & 4 have limitations similar to those of claims 1 & 2; thus, they are rejected on the same basis.

Response to Arguments

12. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

13. Claims 5-13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention; therefore, Applicant's arguments with respect to claims 5-13 are now moot.

Conclusion

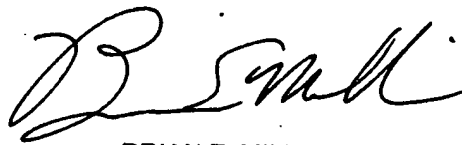
14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is 571-272-7567. The examiner can normally be reached on Monday-Friday 9:30-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Peter Vincent Agustin
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A handwritten signature in black ink, appearing to read "B. E. Miller", is positioned above the printed name and title.

BRIAN E. MILLER
PRIMARY EXAMINER